

RECEIVED  
CENTRAL FAX CENTER

DEC 21 2010

Serial No. 10/567,369  
Docket No. PKHF-04053US  
HIR.201

2

**AMENDMENTS TO THE CLAIMS**

Please amend the claims as follows:

1. (Currently Amended) A semiconductor layer, comprising:  
~~a first layer comprising~~ a  $\text{Ga}_2\text{O}_3$  system single crystal substrate; and  
a ~~second~~ layer comprising a nitride surface of said ~~first layer~~ substrate containing oxygen and nitrogen.
- 2-3. (Cancelled.)
4. (Currently Amended) A semiconductor layer according to claim 1, wherein the ~~first layer~~ substrate comprises  $\text{Ga}_2\text{O}_3$ ,  $(\text{In}_x\text{Ga}_{1-x})_2\text{O}_3$  where  $0 \leq x < 1$ ,  $(\text{Al}_x\text{Ga}_{1-x})_2\text{O}_3$  where  $0 \leq x < 1$ , and  $(\text{In}_x\text{Al}_y\text{Ga}_{1-x-y})_2\text{O}_3$  where  $0 \leq x < 1$ ,  $0 \leq y < 1$ , and  $0 \leq x + y < 1$  as a main constituent.
5. (Cancelled.)
6. (Currently Amended) A semiconductor layer, comprising:  
~~a first layer comprising~~ substrate of a  $\text{Ga}_2\text{O}_3$  system single crystal ~~substrate~~;  
a ~~second~~ layer comprising a nitride surface of said ~~first layer~~ substrate containing oxygen and nitrogen; and  
~~a third layer comprising~~ a GaN system epitaxial layer grown on the ~~second~~ layer comprising the nitride surface.
- 7-8. (Cancelled.)
9. (Currently Amended) A semiconductor layer according to claim 1, wherein the ~~[[first]]~~ layer consists of a single crystal  $\beta\text{-Ga}_2\text{O}_3$ .
10. (Previously Presented) A semiconductor layer according to claim 9, wherein the single crystal  $\beta\text{-Ga}_2\text{O}_3$  has a prismatic shape having a square in cross section, and its axis direction matches a-axis  $\langle 100 \rangle$  orientation, b-axis  $\langle 010 \rangle$  orientation, or c-axis  $\langle 001 \rangle$

Serial No. 10/567,369  
Docket No. PKHF-04053US  
HIR.201

3

orientation.

11. (Currently Amended) A semiconductor layer according to claim 1, wherein the ~~[[first]]~~ layer comprises  $(\text{In}_x\text{Ga}_{1-x})_2\text{O}_3$  where  $0 < x < 1$ .
12. (Currently Amended) A semiconductor layer according to claim 1, wherein the ~~[[first]]~~ layer comprises  $(\text{Al}_x\text{Ga}_{1-x})_2\text{O}_3$  where  $0 < x < 1$ .
13. (Currently Amended) A semiconductor layer according to claim 1, wherein the ~~[[first]]~~ layer comprises  $(\text{In}_x\text{Al}_y\text{Ga}_{1-x-y})_2\text{O}_3$  where  $0 < x < 1$ ,  $0 < y < 1$ , and  $0 < x + y < 1$ .
14. (Cancelled.)
15. (Currently Amended) A semiconductor layer according to claim 6, wherein the ~~[[first]]~~ layer comprising the nitride surface consists of single crystal  $\beta\text{-Ga}_2\text{O}_3$ .
- 16-20. (Cancelled.)
21. (Currently Amended) A semiconductor layer, comprising:
  - a ~~first layer comprising~~ a  $\text{Ga}_2\text{O}_3$  system single crystal substrate; and
  - a ~~second layer comprising~~ a nitride surface of said ~~first layer~~ substrate which contains oxygen and nitrogen,wherein the ~~second layer~~ comprises a GaN system compound semiconductor.